

THE UNIVERSITY OF ALBERTA STAFF BULLETIN

EDMONTON, ALBERTA

DECEMBER 20, 1973

VOLUME TEN, NUMBER TWENTY-FIVE

See story overleaf ...



Halley's Comet (page one) is the brightest of the short period comets. The photograph shows the comet as it appeared at the time of its last perihelion (closest approach to the Sun) in May, 1910. It has been observed and recorded every 76 years for almost 2,000 years and is expected to make its next appearance in 1986. Comet Bennett (above and at right) was the last comet visible to the naked eye from central Alberta. It was discovered by an amateur astronomer in South Africa in 1969. D. P. Hube, Assistant Professor of Physics, photographed Comet Bennett (at right) using a 50mm. lens with a half-minute exposure on Plus-X film, from a site midway between Edmonton and Sherwood Park. Comet Kohoutek will probably be brighter and possess a larger tail than did Comet Bennett. For those who are interested in viewing Comet Kohoutek, telescopes owned by the Department of Physics will be set up on the top level of Stadium Carpark immediately after sunset, daily from January 14 to 18. Visibility will depend, of course, on weather conditions and brightness of the comet.

# Kohoutek and other comets

Once every four or five years, the Sun receives from the distant past a visitor who is able to put on a dazzling display of celestial fireworks for the enjoyment of Earthbound men. While a half dozen to a dozen comets are detected with telescopes each year, only rarely does one become bright enough to be seen with the naked eye. Such a comet is streaking toward the Sun now. Comet 1973f, as it is officially designated, was discovered March 7 by Lubos Kohoutek at Hamburg. Calculations soon indicated that it would reach perihelion (closest approach to the Sun) December 28 and might, for several weeks before and after this date, be easily visible to the naked eye.

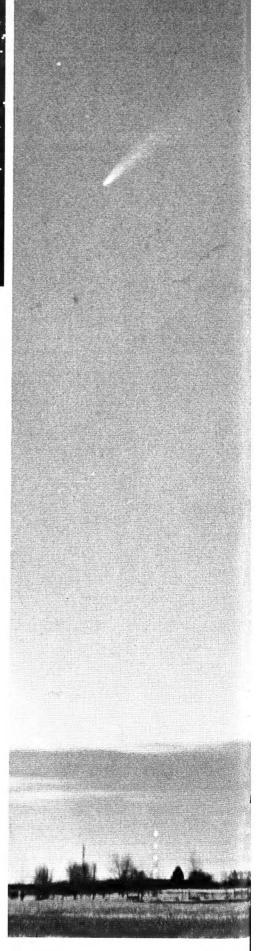
Generally speaking, a comet has as its main component a condensed mixture of ices and dust particles normally moving in a large solar orbit well outside the region occupied by the planets. Due to planetary and stellar gravitational perturbations, this nucleus is drawn into an orbit which brings it close to the Sun where solar radiation melts the ices and frees the dust particles. Individual atoms and molecules from the ice, and dust particles diffuse outward from the nucleus to form the coma, or head, of the comet. Radiation pressure from the Sun and the solar wind then "blow" this material away from the head to form the comet's tails. Regardless of the

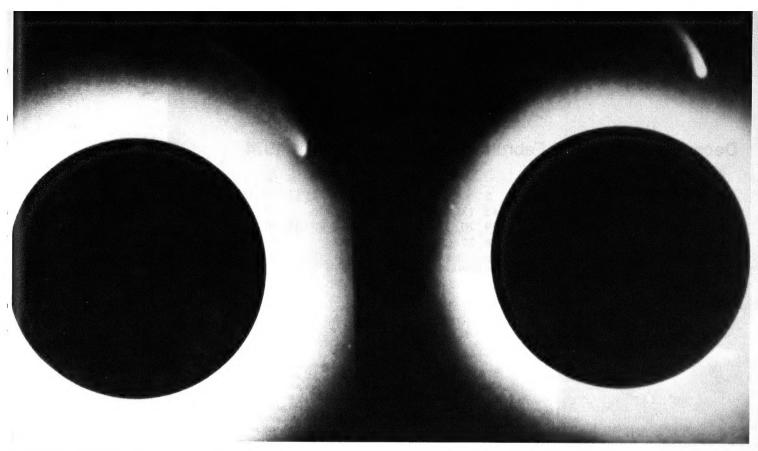
direction of motion of the comet, the tails always point away from the Sun.

From the absence of perturbations produced by comets on the motions of the bodies in the solar system, it can be said that their masses rarely, if ever, exceed about a million million tons. Diameters of cometary nuclei are generally of the order of a few to several tens of kilometers, but it should be noted that some comets do not have a nucleus while others have several.

The coma normally has a diameter only a few times larger than that of Earth (which is between 12,000 and 13,000 kilometers), but diameters of almost 2 million kilometers have been observed. The tails—an almost perfectly straight gas tail and a curved, fan-shaped dust tail-are perhaps the most striking feature of these objects. The tail of Halley's Comet in 1910 reached a length of 150 million kilometers. The record is held by the comet of 1843 whose tail stretched at least 300 million kilometers, or twice the distance from Earth to the Sun. It is generally believed that comets are condensed remnants of the primordial material out of which the Sun and planets were formed four and one-half billion years ago.

Scientists have little knowledge of the detailed structure of a comet nucleus. The structure, size, chemical composition and





Comet Ikeya-Seki (above) is a member of the "sun-grazing family" of comets which pass within a few tens of thousands of miles of the Sun's surface. The photograph was taken October 21, 1965 through a coronograph, an instrument which artificially eclipses the Sun.

relative amounts of ice and dust may be quite different from one comet to the next. The differences make each comet an almost unique object and make it very difficult to predict accurately its behavior subsequent to its discovery. They also contribute to the interest and excitement which comets arouse among both scientists and laymen. For the scientists, Comet Kohoutek is important because they have had more than nine months to prepare for its arrival. Observers around the world are co-ordinating their programs; a new comet observatory has been established in New Mexico, and the Skylab 3 astronauts and the cameras on Mariner 10 will take a detailed look at this comet. More may be learned about the nature of comets from the study of this one object than has been learned during the preceding several centuries of telescopic observations.

During the past two weeks, reports have been received which give a clear demonstration of how unpredictable the behavior of comets can be: Comet Kohoutek at first seemed to become fainter, then grew stronger again. On at least three occasions this century, comets which were expected to become very bright naked-eye objects have dissolved in

space before reaching perihelion, so this comet would not be exceptional if it were to do the same thing,

If the behavior of Comet Kohoutek does not deviate too much from the latest predictions, it should become visible during the first week in January, low in the southwestern sky immediately after sunset. The best view is likely to be obtained with binoculars or a low-power telescope.

# NEW COMMUNITY ARTS FOUNDATION

The Carling Community Arts Foundation has been established by Carling O'Keefe Breweries of Toronto.

Its objectives and policy are to support and encourage the appreciation and development of Canada's multicultural traditions, and to foster deeper understanding and pride in our cultural heritage by granting financial assistance in the following specific areas: (a) folk arts-drama, dance, and music; cuisine, handicrafts, costumery etc.; (b) cultural and educational activities-choral and musical concerts, theatre, linguistics; (c) specific programs of national and provincial ethno-cultural organizations whose basic aims are similar to those of the Foundation. Emphasis will be placed on assistance to cover operational costs alone. It is not the intention of the Foundation to provide capital funding for any activity or to finance conferences and conventions.

An independent Board of Trustees has been set up to allocate all funds.

Further information may be obtained from MRS. MARIE MC CORMICK, Carling O'Keefe Breweries, 79 St. Clair Avenue East, Toronto, Ontario; telephone (416) 921-4111.

## PEOPLE

- J. E. SEGER and L. R. GUE, both of the Department of Educational Administration, attended the Regional Planning Meeting of the University Council for Educational Administration held in Seattle November 28-30. Universities represented were Oregon, Washington, Washington State, and Alberta.
- M. E. EVANS, Assistant Professor of Physics, attended the Annual Meeting of the Geological Society of America held in Dallas, Texas where he presented an invited paper on paleomagnetism in North America.
- D. D. BETTS, Professor of Physics and Director of the Institute of Theoretical Physics, recently visited the University of Connecticut, University of Pennsylvania, and State University of New York at Buffalo where he participated in seminars on models for liquid helium.
- An article co-authored by JOSEPH M.

  KIRMAN, Associate Professor of Elementary

  Education, has been published in the November issue of Social Education.

(Continued on page six)

	Su	FOLIO Mon	thly Calendar			FOLIO MONTHLY CALENDAR list Use it for your own appoints February1974 Calendar shou Compiled by NORMA GUTTERS	is the University's important meetings, ments and memos. Entries for the id be received before January 18.  100E, telephone 432-4991.
December 1973  2 3 4 5 6 7 8  9 10 11 12 13 14 15  16 17 18 19 20 21 22  23 24 25 26 27 28 29  30 31	February 1974  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	March 1974  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	■ New Year's Day, University buildings closed.		■ Last day for receiving applications for admission to Medicine in the 1974-75 season. ■ 8 a.m. Second term lectures begin. ■ 9 a.m. Meeting of the Academic Development Committee.	■ 9 a.m. Meeting of the Board of Governors.	nony seerchy
			■ 4:15 p.m. Meeting of departmental representatives of the Non-Academic Staff Association. ■ 7:30 p.m. Meeting of the Council of the Graduate Students' Association.		■ Last day for registration and change of registration for students registering in second term courses. ■ 9 a.m. Meeting of the Academic Development Committee. ■ 1:30 p.m. Meeting of the University Planning Committee.	■ 11 a.m. Meeting of the Campus Development Committee.	
Jan	13	14	15	16	17	18	19
1974	20	21	■ Last day for payment of second instalment of fees. ■ 7:30 p.m. Meeting of the Council on Student Affairs.	2:30 p.m. Meeting of the Deans' ouncil.	■ 9 a.m. Meeting of the Academic Development Committee.	■ 9 a.m. Meeting of the Board of Governors. ■ 2 p.m. Meeting of the Council on Graduate Study and Research.	26
	27	■ 2 p.m. Special meeting of General Faculties Council to discuss the report of the Senate Task Force on Admission Requirements.	29	30	■ 9 a.m. Meeting of the Academic Development Committee. ■ 1:30 p.m. Meeting of the University Planning Committee.	■ 11 a.m. Meeting of the Campus Development Committee	
		■ 2 p.m. Meeting of General Faculties Council.	C	4 p.m. Meeting of the Nominating ommittee of General Faculties ouncil.	<ul> <li>Last day for adding second term courses to registration in the Faculty of Graduate Studies and Research.</li> <li>9 a.m. Meeting of the Academic Development Committee.</li> </ul>		CHEST STORE AT STORE

(From page three)

- KAROL KROTKI, Professor of Sociology, attended a meeting of the Science Council of Canada in Ottawa with its task force on technology and population. He will continue as a demographic consultant to the task force.
- L. C. GREEN, University Professor and member of the Department of Political Science, gave the keynote speech at the Saskatchewan Association of Human Rights meeting, held in Saskatoon.
- CORNELIUS GILLAM, Professor in the Faculty of Business Administration and Commerce, was a moderator at the regional meeting of the American Business Law Association held in Portland, Oregon.
- I. G. DALLA LANA and D. B. ROBINSON, Professors, and A. E. MATHER, Associate Professor, in the Department of Chemical Engineering, presented papers at the recent meeting of the Canadian Natural Gas Processing Association in Calgary.

## **VISITORS**

- H. ZASSENHAUS, Ohio State University, gave a talk to the Department of Mathematics.
- CHRISTOPH H. VON LANZENAUER,
  Associate Professor of Management Science
  at the University of Western Ontario, recently
  presented a paper to the Faculty of Business
  Administration and Commerce.
- KAREL KUCHAR, University of Utah, led a Theoretical Physics seminar in the Department of Physics.
- E. GRANIRER, University of British Columbia, spoke at a colloquium in the Department of Mathematics.
- ROBERT K. LEIK, Department of Sociology, University of Massachusetts, visited the Department of Sociology recently and gave a talk there.

# NOTICES

## PARKING OPERATIONS

The following notice has been received from L. C. LEITCH, Vice-President (Finance and Administration).

Commencing January 2, 1974 the Parking Office will be responsible for the issuance of parking tickets and the towing away of illegally parked vehicles in parking zones at the University. Such enforcement in other

areas, including 24-hour reserved stalls, will continue to be the responsibility of the Campus Security Force. However, Parking Office personnel will also respond to any apparent violations in these areas during the course of their regular patrols of parking zones.

All enquiries and complaints about parking at the University should be directed to the Parking Office during normal hours of operation, and to the Campus Security Force at any other time.

In addition, the Parking Office will assume complete responsibility for temporary parking required for conferences, seminars, meetings, public functions, and other similar activities at the University. Advance arrangements for such parking should therefore be made with the Parking Office.

The object of these changes is to improve the efficiency of the parking operation at the University through greater consolidation of parking responsibilities. This should permit more direct feed back on all parking needs and problems coupled with the ability to respond accordingly.

#### MEETING FOR SESSIONALS

A meeting has been called to discuss the status and conditions of employment of all persons with full-time teaching loads on limited term appointments. The meeting will be held Monday, January 7 at 8 p.m. in room 243 Central Academic Building. Those interested in further details, or who would like to attend but are unable, should telephone 432-1137 in the afternoons and leave their name and telephone number.

## UTILITIES CONSTRUCTION

Sewer construction and repair work and improvements to the steam service will cause some minor disruption in traffic in certain parts of the campus.

Underground steam lines between the Medical Sciences Building and the Mewburn Pavillion will be dug up and replaced. Although some disruption of traffic will be experienced in the area, access to the University Hospital and to the University Health Service will be maintained by temporary bridges.

A sewer construction project north of the Students' Union Building will cause minimal disruption to the streets, parking lot, and tennis courts because most of the work will be done by tunnelling some 55 feet underground.

Repairs to the storm sewer on 89 Avenue between 115 and 116 Streets will be

underway at approximately the same time. However, traffic along 89 Avenue will be accommodated while work is in progress.

#### **NIGHT SHIFT DISCONTINUED**

Effective Monday, December 10 the Grounds Division of the Department of Physical Plant discontinued operation of the night shift which worked from 11 p.m. to 7 a.m. The change became necessary due to noise problems which had been the subject of complaints from University residents and the surrounding community.

The Grounds Division is now operating on a two-shift basis between 6 a.m. and 11 p.m. The change has necessitated a greater degree of maintenance scheduling, such as snow removal on streets, sidewalks and parking lots, during the daytime hours. In view of these changes, staff and students have been asked to co-operate when closures of the above areas become necessary.

## **EXTENSION COURSES**

Courses in the Department of Extension's certificate programs will begin during the week of January 7. The specific courses being offered are: Management Developmentbusiness organization and administration, business communication, taxation (phone 432-5059 or 432-3027 for details); Personnel Administration-business organization and administration, labour relations, techniques of interviewing (432-5059 or 432-3027); Computer Programming introduction to systems analysis, scientific and engineering computing, COBOL programming (432-5059 or 432-3027); Management Science-systems analysis: theory and application (432-5059 or 432-3027); Real Estate-business organization and administration, land planning and development, real estate finance, business communications (432-5060); Supervisory Citation—basic principles of supervision, communications: personal and group, human relations for supervisors, instruction skills for supervisors, improving work methods and procedures, accident prevention (432-5059 or 432-3027).

The Department also offers courses which lead to certificates granted by the Institute of Canadian Bankers (ICB), the Certified General Accountants Association (CGA), and the Society of Industrial Accountants (RIA). For additional information on the ICB program, telephone 432-5059. For CGA and RIA details, telephone 432-3023.

Registrations for certificate courses will be accepted January 3 from 11 a.m. to

3 p.m. at the Department's information and registration booth in McCauley Plaza.
Registrations may also be completed by mail. Application forms may be obtained by phoning the numbers listed above.

#### YOGA CLUB

The Keep-fit Yoga Club is organizing a beginners Hatha Yoga course and Yoga Relaxation classes. The classes will meet in the evenings beginning January 7.

Further details may be obtained by writing to Keep-fit Yoga Club, Box 120, Sub P.O. 11, The University of Alberta, or by telephoning 439-7897 in the evening.

## CKUA PROGRAM SCHEDULE

Commencing with the issue of January 3, 1974, FOLIO will publish the monthly schedule for CKUA programs. Subsequent program announcements will appear in FOLIO the last Thursday of every month.

This will replace the campus distribution of "University of Alberta—On the air".

Off-campus distribution of the program schedule will continue as a re-print of FOLIO's entry.

## STAFF REP EDITOR REQUIRED

The Non-Academic Staff Association requires an editor for a part-time job of editing the STAFF REP, the NASA monthly publication. Remuneration is \$100 per month. Apply to the NASA Office, room 335 General Services Building.

## THIS WEEK AND NEXT

Listings must reach the Editor by 9 a.m. the Friday prior to publication. Written notification is preferred. Compiled by NORMA GUITERIDGE, 432-4991.

## 21 DECEMBER, FRIDAY

## **Faculty Club**

Downstairs. TGIF—Clam chowder, hot apple pie with rum sauce. \$2. Dancing to the Sound Investment 9 p.m. until midnight. (The Faculty Club will be closed Saturday,
December 22 for the staff Christmas party.)

Television North Program 'Sean O'Casey' 8:30 p.m. SEAN O'CASEY, dramatist, discusses the great playwrights he has known, tells of the poverty of his youth, and shares his hopes for the future. Cable 13.

# 22 DECEMBER, SATURDAY

## CKUA Radio

6:45 p.m. Music hour—Suite from *Harry Janos*, Kodaly; Variations on a Rococo Theme,

Tchaikovsky; Ballade for Piano and Orchestra, Fauré; Introduction and Tarantelle for Violin and Orchestra, Sarasate. 580 kc. - 98.1 mc.

## 24 DECEMBER, MONDAY

## CKUA Radio

6:45 p.m. Music hour—Menotti, Amahl and the Night Visitors. 580 kc. - 98.1 mc.

## 25 DECEMBER, TUESDAY

#### **CKUA** Radio

6:45 p.m. Music hour—Vaughan Williams, *Hodie* (a Christmas cantata). 580 kc. - 98.1 mc.

## 26 DECEMBER, WEDNESDAY

#### **CKUA** Radio

6:45 p.m. Music hour—Mendelssohn, Trio Op. 49; Stravinsky, Danses Concertantes; Wagner, Adagio for Clarinet and String Quintet. 580 kc. - 98.1 mc.

#### Alberta Bollet

26 and 27 December. Performances at 8:30 p.m. "Ballet and All That Jazz." Canada's youngest professional company in a world premiere, choreographed by EVA VON GENSCY-Admission: \$6.50, \$5.50, \$4.50, \$3.00; senior citizens, students and children: \$5.50, \$4.50, \$3.50 and \$2.50. Available at all Bay stores, and at the Jubilee Auditorium on the days of the performance.

## 27 DECEMBER, THURSDAY

## Basketball

And 28, 29 and 30 December. Klondike Classic Basketball Tournament, featuring university teams from Guelph, Lakehead, Eastern Montana, and The University of Alberta Golden Bears. Physical Education Centre.

## CKUA Radio

6:45 p.m. Music hour—Schubert, Symphony No. 2; Mendelssohn, Piano Concerto in E Major. 580 kc. - 98.1 mc.

## 28 DECEMBER, FRIDAY

## **Faculty Club**

Downstairs. TGIF—Member's Appreciation Night. Hip of beef. Dancing to the "Sounds of the 50s," the music of J. Shaw.

## CKUA Radio

6:45 p.m. Music hour—Music taped at various concerts at The University of Alberta. 580 kc. - 98.1 mc.

# 29 DECEMBER, SATURDAY

## Faculty Club

Upstairs. Regular dinner menu served 6 to 10 p.m.

## CKUA Radio

6:45 p.m. Music hour—Roussel, *The Spider's Feast*; Debussy, Rhapsody for Saxophone and Orchestra; Codley, Aria and Dance for Viola and Orchestra; Morton Gould, Spirituals for Orchestra, 580 kc. - 98.1 mc.

## **Edmonton Symphony Society**

8:30 p.m. *Oratorio*. Jubilee Auditorium, Tickets: Symphony box office, 433-2020 (24 hours).

## 30 DECEMBER, SUNDAY

#### Hockey

7:30 p.m. University of Alberta Golden Bears vs. the Polish National Team. Varsity Arena.

## 31 DECEMBER, MONDAY

#### CKUA Radio

6:45 p.m. Music hour—Verdi, *Un Ballo in Mashera* (highlights), 580 kc. - 98.1 mc.

#### **Faculty Club**

New Year's Eve. All-inclusive evening, \$35 per couple. Two bands.

## EXHIBITIONS AND PLAYS

## **Edmonton Art Gallery**

Until 27 January. "Snow show," a Christmas exhibition from the Gallery's permanent collection. Until 14 January. JACK FORBES, Ceramic sculptures. Until 13 January. University of Alberta Law Centre, Sculpture competition. Until 25 February. Materials and Techniques of Painting, in the Junior Gallery.

# **FOLIO**

## THE UNIVERSITY OF ALBERTA, EDMONTON, ALBERTA

Published every Thursday for the staff and interested persons by the University Publications Office Copyright 1973

Marcy Davies, Editor

FOLIO Policy Committee E D Hodgson (Professor of Educational Administration), J W Carmichael (Professor of Bacteriology), and Aylmer A. Ryan (Provost and Executive Assistant to the President)

Staff, Jeanette Rothrock (Acting Publications Officer), Norma Gutteridge (Copy and Design Editor), Marjorie Olsen and David Norwood (Editorial Assistants)

Business Manager A S Knowler (Chief Accountant, Office of the

## FOLIO OFFICE

Telephone 432-499

326 Assimboia Hall, The University of Alberta Printed by the Printing Department

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## University Art Gallery and Museum

Until 30 December. Exhibition of quilts by DOROTHEA DEAN; exhibition of sculpture by ROBERT DOWNING.

#### Citadel Special for Children

26, 27, 28 December at 11 a.m. and 2:30 p.m., and 29 December at 10:30 a.m. A special presentation of the Citadel-on-wheels production of Inook and the Sun, at the Citadel Theatre, Directed by IRENE N. MATTS, costumes and set designed by TIM WATERS. Admission \$1 for adults, 75c for children; tickets available by calling the Citadel box office, 424-2828.

#### Theatre 3

Until 30 December. Curtain times: Tuesday, Wednesday, Thursday, Friday, 8:30 p.m.; Saturday, 7 and 10:30 p.m.; Sunday, 2 and 7:30 p.m. Kenneth Grahame's Wind in the Willows, adapted for the stage by BILL PASNAK and directed by KENNETH AGRELL-SMITH. Central Library Theatre, Sir Winston Churchill Square. Tickets from Theatre 3, 709 9990 Jasper Avenue, Edmonton T5J 1P4, telephone 424-3488. (No performance Christmas Day.)

## TROPICAL DISPLAYHOUSE

The following plants are currently in bloom in the Tropical Displayhouse: Streptosolen, "Red Powderpuff" (Calliandra), Orchids (Cattleya), Firecracker vine (Manettia), and Passionflower (Passiflora)—each blossom on the Passionflower lasts only one day.

## POSITIONS VACANT

## NON-ACADEMIC STAFF

Applicants are sought for the following positions. The Office of Personnel Services and Staff Relations (Room 121, Administration Building) will provide further details to interested persons, who are not to approach the department directly.

Clerk Typist II (\$354-\$453)—Household Economics Clerk Typist III (\$412-\$523)—Educational Psychology

Clerk Steno II (\$372-\$475)—Soil Science Clerk Steno III (\$431-\$549)—Chemistry; Pharmacology Clerk Steno III (Temporary) (\$431-\$549)—Paediatrics Student Record Processing Clerk (\$431-\$549)—Office of the Registrar Dental Assistant (\$392-\$499)—Dentistry

Audiovisual Technician III (\$701-\$895)—
Audiovisual Media Centre
Chemical Technologist II (\$701-\$895)—Chemistry
Electronics Technician I (\$549-\$701)—Killam Earth

Sqiences

Ice Rink Attendant (\$475-\$606)—Physical Education

Pathology Technologist I (\$549-\$701)—Provincial Laboratory

Analyst (\$895-\$1,142)—Computing Services Technician I (\$523-\$668)—Physics Laboratory Assistant III (\$453-\$577)—Pharmacology Administrative/Professional Officer (\$9,360-\$11,715 Yearly)—Chemistry

Research Assistant (\$300-\$500 negotiable)—Psychology

## GRADUATE SCHOLARSHIPS AND AWARDS

Notices regarding other awards and scholarships are posted on the bulletin board in the rotunda of the Administration Building. All enquiries should be directed to L. HENDERSON, Administrator of Student Awards, 122 Administration Building, telephone 432-3495

# ST. JOHN'S COLLEGE, CAMBRIDGE RESEARCH STUDENTSHIPS

Value: £795 per annum for three years, plus approved University and College fees, allowances for dependants, contribution towards travel expenses of the student from his home, and other related expenses. Field of study: any subject, but restricted to those entering a PhD program at Cambridge. Conditions: restricted to men, married or single, who have received, or expect to receive, a first class honours degree or its equivalent. Where tenable: Cambridge University, St. John's College. Closing date: April 1, 1974. Write to: Senior Tutor, St. John's College, Cambridge CB2 1TP, England.

N.B. At the current rate of exchange, one British pound equals \$2.35 Canadian, approximately.

## KILLAM MEMORIAL SCHOLARSHIPS 1974-75

Value: \$4,500-\$5,000; renewable. Field of study: Master's or Doctoral program in the natural sciences, social sciences and humanities. Conditions: Eligibility based on a first class undergraduate degree in the field of study the student wishes to pursue. Where tenable: Dalhousie University, Halifax, Nova Scotia. Travel assistance is available. Candidates are not required to submit application forms for the Scholarships; instead they should apply to the Registrar, Dalhousie University, Halifax, Nova Scotia for admission, as soon as possible.

## KILLAM POSTDOCTORAL FELLOWSHIPS

Value: \$8,800, plus travel allowances. Conditions: Applicants should not be more than 35 years old and should possess a PhD from a recognized university, or expect to obtain one before taking up an award. Fellows may engage in teaching or other similar duties at the University. Where tenable: Dalhousie University. Write to: The Office of the Dean, Faculty of Graduate Studies, Dalhousie University, Halifax, Nova Scotia.

## ELI WAGNER FOUNDATION FELLOWSHIP

Value: 10,000 Swedish krona. Number; one (may be divided between two candidates). Duration: unspecified. Where tenable: unrestricted. Field of study: postgraduate research on the history of womankind in its anthropological, archaeological, economic, ethnological, historic, legal, literary, psychological, religious or sociological aspects. Write to: Mrs. Barbo Alving, Sibyllegatan 59, 114 43 Stockholm, Sweden.

N.B. At the current rate of exchange, one Swedish kronin equals approximately 22 Canadian cents.

## PERSONAL NOTICES

Notices must be received by 9 a.m. the Friday prior to publication. Rate is ten cents per word for the first insertion and five cents per word for subsequent insertions ordered with the first. Minimum charge is \$1. To avoid billing, notices MUST BE PAID IN ADVANCE. For assistance or order blanks, telephone 432-4991.

#### Accommodation available

FOR RENT—Furnished three bedroom bungalow, crescent location in Riverbend. Available February. 435-1383

FOR RENT—Central three bedroom house, two baths, heated garage, developed basement. \$300 per month. Telephone 488-8893.

FOR sALE—Riverbend, excellent four-bedroom, 2½ bathroom bi-level. Family room with fireplace. Fenced and landscaped. 3-car garage 30' x 20'. Call Jean Buxton, Buxton Real Estate, 436-1140 or 487-1638.

FOR RENT—One-bedroom basement apartment, January-September; edge campus, nice, furnished, \$65/month (one person). 433-3485.

## Goods and services

WANTED—Occasional ride after 4:00 p.m. University to St. Albert. Telephone 458-0025.

SUMMER '74—We are now registering for Charter Flights to London and Europe. A 60 day advance booking will be in effect. For further particulars call Iris Rosen and Associates, 488-8181.

HOW ABOUT SKI weeks or weekends in B.C. Call Iris Rosen and Associates, 488-8181.

IRIS ROSEN and Associates wish you a very Merry Christmas, a Happy and successful New Year and thank you for your confidence and patronage.

DANCE? The Merseysiders Association will be holding a dance December 22, 8 p.m. in the Silver Slipper in the Exhibition Grounds. Non-members welcome. FOR SALE—Derrick Club social share \$70: unused

Polish chess set, wood, paid \$65 now \$35. 432-7184. MUST SELL—35mm enlarger. Telephone Jim, 432-3551, 467-2702.

TYPING DONE—Fast, efficient service. Georgina Barton, 429-3219 or 489-4810.

EXCURSION FARES—Coast to coast: how about those business trips, conferences, etc.? We arrange domestic bookings, i.e., Canada and the U.S., as well as international ones, and attend to flights, hotels, and car rentals. For further information call Iris Rosen and Associates at 488-8181.

NOW BOOKING—J & K Hayrides. Bonfires available. 434-3835.

PLUMBING—FOR FREE ESTIMATES on basement bathrooms, repairs, alterations etc. call 439-4670, anytime.

PROFESSIONAL DRAFTING—Drafting experience in all fields for theses and reports. Ron 469-3434, 467-0491 evenings.

DON'T WORRY about your pets while on holidays. I'll look after them. Telephone Stephan 433-3533 (evenings).

SEASON'S GREETINGS with flowers and plants, vases and planters, and other things . . . from THE CACTUS FLOWER HOUSE 9520 - 87 Street. 465-1111.

FOR SALE—Leitz 90mm. Elmar lens with 90mm. Leitz parallax correcting bright line viewfinder, \$115, 432-4008.

FOR SALE—Domestic Zig Zag sewing machine, good condition, \$90. 434-8306.